

Reflections on Contemporary Ethnoarchaeology

Reflexiones sobre etnoarqueología contemporánea

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This article discusses some of the central topics in ethnoarchaeology and approaches them from a Latin American perspective. The development of the subdiscipline is summarized and analyzed, and case studies in the region are provided. Moreover, since ethnoarchaeology in Latin America cannot be detached from the state of the discipline in the rest of the world, there are references to global developments that aim to contextualize these case studies. Some of the criticisms made against the subdiscipline are included as well, and they are discussed in the light of the current situation. Ethnoarchaeology's contributions to the interpretation of the archaeological record and to theory building in archaeology are examined. It is concluded that one of the main contributions of ethnoarchaeology is the mitigation of the ethnocentrism that permeates the archaeological view of the people in the past and the interpretation of long-term human processes. With its particular purview on contemporary societies, ethnoarchaeology is providing substantial input, not only to the understanding of human behavior, but also to archaeological theory.

KEYWORDS

ETHNOARCHAEOLOGY, LATIN AMERICA, ARCHAEOLOGICAL THEORY AND PRACTICE

Este artículo analiza algunos de los temas centrales de la etnoarqueología y se acerca a ellos desde una perspectiva latinoamericana. Resume y discute el desarrollo de la subdisciplina y proporciona ejemplos de esta región. Además, dado que la etnoarqueología en América Latina no puede entenderse desligada de los avances de la disciplina en el resto del mundo, se incluyen referencias a otros ámbitos geográficos a escala mundial para contextualizar estos ejemplos. También se incluyen algunas de las críticas formuladas contra la subdisciplina y se discuten teniendo en cuenta las tendencias actuales. Se examinan las contribuciones de la etnoarqueología a la interpretación del registro arqueológico y a la construcción de la teoría arqueológica. El artículo concluye que una de las principales aportaciones de la etnoarqueología es que ayuda a mitigar el etnocentrismo que impregna la interpretación arqueológica de las poblaciones pasadas y la interpretación de los procesos humanos a largo plazo. Con su enfoque particular en las sociedades contemporáneas, la etnoarqueología está proporcionando una aportación sustancial, no sólo para la comprensión de la conducta humana, sino también para la construcción de la teoría arqueológica.

PALABRAS CLAVE

ETNOARQUEOLOGÍA, AMÉRICA LATINA, TEORÍA Y PRÁCTICA ARQUEOLÓGICA

Introduction

In this article, I reflect upon the contemporary praxis of ethnoarchaeology from a Latin American perspective, a region that, supposedly, neither is, nor was, at the core of the development of this research strategy. To achieve my goal, I discuss some ethnoarchaeological trends present in the region and I examine a few case studies. This article is not a complete and detailed summary of ethnoarchaeology in the region, and, therefore, I will concentrate on the areas and subjects I know best. Moreover, ethnoarchaeology in Latin America cannot be detached from ethnoarchaeology in the rest of the world, so I refer to global developments in the field in order to contextualize my comments and ideas.

In the 1960s, disappointed by the lack of interest ethnography showed in material culture and by the lack of detail in the reports produced by ethnographers about the production, use, and deposit of objects, archaeologists set out to find that information—which they considered crucial for “theory building in archaeology”—themselves. Even though ethnoarchaeology was, and still is, much more methodological than theoretical, it was a derivative of explicit theoretical intent and of the “loss of innocence” that characterized the archaeological debate in the beginning of processual archaeology. During the last fifty years, archaeologists have carried out fieldwork basically—but not exclusively—in traditional societies to help answering questions regarding the interpretation of the archaeological record and to develop and refine analogies; thus, ethnoarchaeology was turned into one of the main sources of archaeological analogies.

Although it is not widely recognized, ethnoarchaeology has been central to the development of contemporary archaeology. Its contributions can be summarized in four points: *a*) it has generated a better understanding of non-western traditional societies, both from the past and the present; *b*) it has produced a great number of analogical references in an operational way, for them to be applied to the archaeological interpretation; *c*) it is a resource for proposing and testing hypotheses about many dimensions of past human societies; and *d*) it has aided the process of theory-building in archaeology. In spite of these contributions, this subdiscipline has not been exempt from criticism and debate (see summary in Yu, 2014: 2540-2544). Most of it was, and still is, related to the applicability of ethnoarchaeological models to the interpretation of the archaeological record (Sullivan, 2008a; González-Ruibal, 2008), or questioning the ethical or the moral dimensions of the practice of ethnoarchaeology (Gosden, 1999).

In the last two decades, several books and papers (Fernández Martínez, 1994; David and Kramer, 2001; González-Ruibal, 2003; Politis, 2004, 2014; Roux, 2007; Lane, 2006; Skibo, 2009; Galloway, 2011; Lyons, 2013; Marciniak and Yalman, 2013; Yu, 2014, among many others) have summarized and revealed developments in the field and the current status of ethnoarchaeology. Views on this subdiscipline have even been presented from an autobiographical perspective (i.e., Gifford-González, 2010; Hudson, 2010; Siegel 2014). With few exceptions (i.e., González-Ruibal, 2003; Politis, 2004; Galloway, 2011; Marciniak and Yalman, 2013), however, the contributions from non-Anglo-American researchers and the peculi-

arities of ethnoarchaeology in Latin America have been overlooked. Most of the theoretical reflections written in languages other than English or produced outside the USA-Great Britain-Australia axis remain quite hidden outside the country or region of origin (although the same does not happen with the data). This invisibility not only concerns the so-called “third-world” countries but it is also evident in books written in Western Europe, such as France (Gallay, 2011), Italy (Vidale, 2004) and Spain (González-Ruibal, 2003). Needless to say, ethnoarchaeology from eastern countries such as China (Kong, 2013) and Russia (Kenig *et al.*, 2013) or the Near East (Tekkök-Biçken, 2000) remain imperceptible in global debate about this subdiscipline.¹ Without doubt, the most popular and best known ideas and models based on ethnoarchaeology have a strong Anglo-American bias. This is justifiable only in part. British and North American researchers have made important and sustainable contributions to this subdiscipline and were instrumental in developing the field during the early days. These Anglo-American groups of active researchers, supported by wealthy and prestigious universities and foundations that funded long-term projects, have been crucial in setting the groundwork for ethnoarchaeology and have produced methodological, conceptual and theoretical contributions that have consolidated the subdiscipline (among many others, Binford, 1978; Longacre, 1978; Kramer, 1979, 1982; Hodder, 1982a, 1982b; Gould, 1980). However, Latin Americans and other archaeologists researching in this region—Latin Americanists—have also contributed to the growth of the subdiscipline, and, especially in the last two decades, have produced original approaches (among many others, Hernando, 1997; Yacobaccio *et al.*, 1998; Wüst, 1998; Silva, 2000, 2009; Nielsen, 2000; González-Ruibal, 2003; Politis, 2007; López Mazz, 2006; García Roselló, 2008; González-Ruibal *et al.*, 2011; Ramón, 2013), which remain quite opaque to the rest of the world. Therefore, one of the main purposes of this article is to incorporate the voices of Latin Americans and Latin Americanists—especially those from Spain—into the current debate, and to highlight some of their developments and ideas.

Defining ethnoarchaeology

To put it in simple words, in order to lay foundations for the sake of understanding, ethnoarchaeology can be broadly defined as a research strategy and a subdiscipline of anthropology that can be placed in what Binford (1981) called actualistic studies. Ethnoarchaeology differs from other actualistic studies (such as taphonomy or experimental archaeology) in that it includes the systematic observation of living societies. We can distinguish this subdiscipline from other types of ethnographic research by its explicit focus

1. Fortunately, and in consonance with the goals and policies of the World Archeological Congress, the recent book edited by Marciniak and Yalman (2013) has brought into the attention of the western world the ethnoarchaeological developments from countries that are usually not well known.

on material culture and its interactions with social and cultural dynamics, and because it keeps archaeological research problems in mind.

There are many definitions of ethnoarchaeology, but initially it was simply and basically described as the acquisition of original ethnographic data to aid archaeological interpretation. However, it is much more than this, and different definitions abound. Although, in the past, some synonyms proliferated—such as “action archaeology”, “living archaeology”, “archaeo-ethnography”, “paleo-ethnography”, or “ethnographic archaeology”—the term ethnoarchaeology won popularity and today is, by far, the preferred word to refer to this kind of research strategy.

Ethnoarchaeology can be defined as the study of the relationships between human behavior and their archaeological consequences in the present. It is concerned with the investigation of the material culture and built environments of living people, in relation to the processes which effects and affects their conversion to archaeological context (Lane, 2006: 402). One of the most comprehensive definitions of ethnoarchaeology among the many available (see summary in David and Kramer, 2001), and my personal favorite, is that provided by B. Sillar:

[...] the study of how material culture is produced, used and deposited by contemporary societies in relation to the wider social, ideological, economic, environmental and/or technical aspects of the society concerned, and with specific reference to the problems of interpreting archaeological material. (Sillar, 2000: 6)

Another interesting definition is by Alfredo González-Ruibal, in what is probably the only ethnoarchaeological textbook written in Spanish:

[...] estudio arqueológico de sociedades generalmente preindustriales, con el objetivo de producir una arqueología más crítica y menos sesgada culturalmente, de generar ideas que favorezcan el debate arqueológico y de contribuir al conocimiento de las sociedades con las que se trabaja, teniendo en cuenta sus tradiciones, ideas y puntos de vista. (González-Ruibal, 2003: 12)²

Other research strategies that use ethnographic data with intensity, in some way or another, have also been labeled as ethnoarchaeology. This has generated some confusion. Neither the use or application of published ethnographic data to interpret the archaeological record nor the study of ethnographic collections from museums with the goal of aiding archaeological interpretation is considered ethnoarchaeology (David and Kramer, 2001). Considering examples from South America, the compilation and integration of ethnographic and historical data made by Dominique Legoupil (1989) in the context of her archaeological research of the southern Chilean channels cannot be included within

2. “archaeological studies of preindustrial societies, generally, with the goal of producing a more critical and less culturally biased archaeology, of generating ideas that favor archaeological debate, and of contributing to the knowledge of the societies with which one works, taking into account their traditions, ideas, and points of view” (our translation).

what is currently called ethnoarchaeology. Neither should we include the research carried out in the Beagle Channel in Argentina by Assumpció Vila and Jordi Estévez, and their research team (Estévez and Vila, 1995; Vila and Estévez, 2000; Vila *et al.*, 2007; but see García Roselló, 2008: 36-37 and Lane, 2014: 137), because its main goal was

[...] tanto depurar la metodología arqueológica como verificar modelos explicativos o leyes generales del Modo de Producción (cazador en este caso) [...]. Así, utilizamos técnicas arqueológicas en el estudio de objetos etnográficos, usamos datos etnográficos para verificar hipótesis metodológicas arqueológicas y datos arqueológicos para refutar o validar informaciones etnohistóricas. (Estévez and Vila, 1995: 19)³

Moreover, in the definition of what is not, strictly speaking, ethnoarchaeology (regardless of the interest of the studies in question), several examples of Spanish works that have defined themselves as ethnoarchaeological are included. However, they use ethnographic and historical data about religious beliefs and practices to understand the mythology and the rituals of prehistoric societies (Arizaga Castro and Vila, 2007; Moya Maleno, 2010, 2012).

What I call ethnoarchaeology does not cover the series of works on the Guaraní people done by Brazilian researchers either (such as Rodrigues and Alfonso, 2002; Catafesto de Souza, 2002), who have attempted to use analogy and to compare data obtained from three different sources: archaeological sites with Guaraní pottery, colonial documents, and published ethnographic research (Catafesto de Souza, 2002: 212). This set of works does not provide original data about living populations, although, in many of them, ethnographic, ethnohistorical, and archaeological data from the indigenous populations of Latin America are combined in very productive and interesting ways.

These cases show the complex use of ethnographic and historical data in the process of archaeological investigation, but they lack one of the defining elements of ethnoarchaeology: the gathering of original data among living people. Nevertheless, it is not my intention to create a solid line separating what is and what is not ethnoarchaeology. The frontier between disciplines and approaches are arbitrary, increasingly permeable, and labels and definitions only represent some kind of consensus that is worthy basically for communication purposes and mutual understanding.

Other related approaches that have emerged in recent years are the archaeology of the present (González-Ruibal, 2008a, 2014; Harrison and Schofield, 2010; Harrison, 2011) and archaeological ethnographies (Hamilakis and Anagnostopoulos, 2009). They should not, however, be taken as synonymous, since they present a critical view of current ethnoarchaeological practice and have proposed novel perspectives that engage past and present

3. "...both polishing archaeological methodology and verifying explanatory models or general laws about the Mode of Production (hunting, in this case) [...]. Thus, we use archaeological techniques in the study of ethnographic objects, we use ethnographic data to verify methodological or archaeological hypotheses in order to refute or validate ethnohistorical information".

in a different way, downplaying its distinction and definitively not centered in analogical argumentation. The difference between these two approaches and ethnoarchaeology is that the latter focuses on societies whose complexity level may be comparable to that of past societies, while the former studies modernity. These new approaches propose the study of the materiality of western industrial contemporary societies and would have their main connections with the modern material culture studies.

A very very short historical background

In general terms, the development of ethnoarchaeology has followed the main archaeological theoretical trends. As such, and simplifying something that is more complex, ethnoarchaeology was embedded in the entangled succession of theoretical scenarios that have characterized archaeology in the last fifty years, and went from processualism, to post-processualism, to structuralism/post-structuralism (Criado Boado, 2014). Moreover, the discipline has followed other theoretical drifts as well, such as behavioral ecology (Bird, 1996; Bird *et al.*, 2009) and the “ontological turn” (González-Ruibal *et al.*, 2011).

The attempt to use ethnographic information to interpret the archaeological record is neither new nor the exclusive domain of ethnoarchaeology. In the past, this use was called “ethnographic parallel”, and it involved using already existing ethnographic data, without setting criteria and limitations, and projecting or imposing to a given archaeological case. This kind of application of the ethnographic data was characteristic of the culture-history approach. Although the term ethnoarchaeology was used for the first time in the 1900s by Jesse Fewkes in connection with the use of the local knowledge of North American Indians (David and Kramer, 2001: 6), it was in the sixties, upon the advent of processual archaeology, that archaeologists became interested in ethnographic analogies in a systematic way, realizing, at the same time, that ethnographers were not giving proper attention to the study of material culture. What was new in those times was that archaeologists wanted to obtain ethnographic information by themselves with the fundamental objective of aiding the comprehension of the archaeological record. Also new was the attention given to technological processes and their by-products, and to discard patterns and garbage management. At the same time, it was a great effort to make the observed variables and the contexts of these observations explicit and measurable. These specifics would make analogical reasoning more objective and controlled.

In the early years, archaeologists such as Maxine R. Kleindiest and Patty Jo Watson, who were among the Pueblo Indians in the 1950s; Robert Asher, among the Seri Indian of Mexico; and Peter White, in the Highlands of New Guinea, generated the first ethnographic set of data obtained with the specific purpose of aiding the interpretation of the archaeological record (David and Kramer, 2001). During the 1960s—processualism’s foundational decade—the term “ethnoarchaeology” was reborn (see, for example, White,

1967; Stanislawski, 1969), and archaeologists started not only to gather the ethnographic information themselves, but also to reflect upon the methodology and the theory of this practice (Ascher, 1968; Binford, 1968; Longacre and Ayres, 1968). It was in the 1970s, however, when ethnoarchaeology achieved full status and developed its theoretical and methodological basis. Contemporary ethnoarchaeology emerged as a direct result of the development of actualistic studies and due to the optimism about the possibility of such studies explaining the archaeological record everywhere. It was also an outcome of the need to construct Middle Range Theory, in order to abridge the gap between the dynamics of the living systems and the static nature of the archaeological record (Binford, 1981; Schiffer, 1978). In that decade, Lewis Binford developed his ethnoarchaeological approach in *Nunamiut Ethnoarchaeology* (Binford, 1978), based on his research on the Nunamiut people in Alaska. Also in those years, the Kalinga Ethnoarchaeological Project (KEP) started under the direction of William Longacre (Longacre, 1974). After an exploratory first trip in 1973, Longacre carried out a twelve-month field season in 1975 in order to record the stylistic variability of Kalinga pottery and to record and understand the social context of its production (Stark and Skibo, 2007). These contributions, together with Richard Gould's (1968, 1971, 1978)—who performed pioneering work in the Western Desert in Australia—, John Yellen's (1977)—among the Kalahari Kung—and the books edited by Donnan and Clewlow (1974) and Kramer (1979, see also Kramer, 1982), established the foundations of ethnoarchaeology within the processual paradigm and transformed the subdiscipline into one of the prime producer of the models to interpret the archaeological record of past societies.

The initial optimism about processual archaeology, in the belief that human behavior was subject to some kind of laws, pervaded ethnoarchaeology and oriented its conceptual development in the 1970s and 1980s. During these early years, there was also an underlying conviction in the possibility of generating universal laws that related human behavior to material remains. In fact, Michael Schiffer assumed that, together with experimental archaeology, ethnoarchaeology would be the main source for the production of these laws. Consequently, great attention was given to identifying and describing in an objective way the processes that contributed to the formation of archaeological deposits (i.e., bone breaking and discard, use of domestic space, camp construction and abandonment, etc.), as well as to the mechanisms and the physical procedures related to the production of different kinds of artifacts, especially pottery and lithic tools (Lane, 2006). The research carried out by Susan Kent (1984), in the USA, and by James O'Connell (1987), in Australia, are good examples of the mainstream ethnoarchaeology in those times.

Since the late 1970s, and especially during the 1980s, specific studies of living traditional societies were carried by archaeologists in several parts of the world—such as western Iran, Tanzania, the Kalahari desert, India, the Andes, etc. Among them, some long-term, multi-stage enterprises, such as the Coxoh Ethnoarchaeological Project in the Maya Highlands in Mexico conducted by Brian Hayden, the Mandara Project in Cameroon and Nigeria headed by Nicholas David, and the research carried out by Valentine Roux

and collaborators in Uttam Nagar and Haryana in India—deserved a mention. As a result, a new approach was developed: the search for general principles that connected human behavior to material culture.

Processual ethnoarchaeology was confronted for the first time in the 1980s, when ethnoarchaeology began to be included in a post-processual agenda as well. The leader of this renovation was Ian Hodder, who after his vital ethnoarchaeological experience in the late seventies in the Lake Baringo area in Kenya, developed a new theoretical approach (Hodder, 1979, 1982, 1982b, 1985). Despite the methodological criticisms to Hodder's ethnoarchaeological research (MacEachern, 1996), his ideas strongly affected archaeological theory and the consideration of social and ideational factors in interpreting the archaeological record (Lyons, 2013). The new paradigm emphasized reflexivity and hermeneutics, and was based in Bourdieu's theory of practice, all of which permeated post-processual ethnoarchaeology. Fieldwork and data collection took a more emic character (see, for example, Parker Pearson and Ramilisonina, 1998; Silva, 2000) (fig. 1) in opposition to the externalism and quantitative methodology that characterized processual ethnoarchaeology. In fact, Binford believed that ethnoarchaeologists should be external observers of human behavior and its material derivatives, as this would cause observational advantages, since they would not be influenced by what people themselves think about their engagement with the material world (Fewster, 2013: 2). Obviously, Binford did not believe in any influence of the archaeologist subjectivity on his observations whatsoever; conviction that was strongly debated by post-processual archaeologists, who made the first ethical reflections emerge (Hodder, 1982a: 39).

From within post-processualism, the range of interests that ethnoarchaeology incorporated was expanded, especially as it widened its focus beyond techno-economic aspects—which dominated the previous years—to the understanding of greater levels of complexity, in the attempt to discern material correlates of the social and ideational realms. Mainly, this new current reconceptualized material culture, in the attempt to determine the multiple dimensions in which it operates and focusing on its meaning. In this sense, certain aspects that were hardly considered in previous research were emphasized, such as symbolism and the study of the non-utilitarian dimensions of material culture in society. Ethnicity, gender, style, power, agency and so on were among the new themes dealt with by this innovative trend (i.e., David *et al.* 1988; Smith, 1992, 1994; Jarvenpa and Brumbach, 1995; Fewster, 2001b).

Within the frame of the behavioral ecology, a subset of evolutionary ecology, ethnoarchaeology has always been an important source for theoretical reflections (O'Connell, 1995) and for producing and testing models (O'Connell *et al.*, 1988a, 1988b, 1990; Lupo, 1995, 2001; Bird, 1996, 1997; Bird and Bliege Bird, 1997, 2000; Lupo and O'Connell, 2002; Bird *et al.*, 2009). Although this approach could be criticized for its inherent reductionism and implicit rejection of "culture" as an explanation for human behavior (see Bird and O'Connell, 2006) or for its sociobiological orientation and ecological determinism (González-Ruibal, 2006: 46), it has produced a tremendous amount of original data, especially from hunter-gatherer societies.



Fig. 1. Brazilian ethnoarchaeologist Fabiola Silva among the Asurini in the Kwatinemu village (Brazil). She was organizing a trip with the Asurini to find the ancient villages along the Ipiçava creek. 2010. Photo courtesy of Fabiola Silva.

In parallel with these main trends, basically from Anglo-American origin, there is a francophone ethnoarchaeology with antecedents in the classic French ethnographic studies on material culture (González-Ruibal, 2003: 21-22). This trend focuses on the identification of technological procedures (pottery, metallurgy, etc.), paying attention to the broader social context and to learning processes. Recently, Roux (2013) has summarized the francophone ethnoarchaeology recognizing three main approaches. Firstly, that based on Gardin's logicism program (1979), which intended to discover regularities whose condition of application to the archaeological data was explicit. These regularities sought to achieve the rank of "laws". The research by Gallay (1991, 1992, 2007) and Gelbert (2002, 2003) derives directly from this approach, as well as Roux's (2000, 2007), with a more positivist and nomothetical methodology, who has been studying ceramic and bead production in India, giving special attention to learning and specialization processes. Secondly, an approach that proposes "typological regularities", which links material traits with different domains. The ethnoarchaeological studies made by Anne-Marie and Pierre

Pétrequin (1984) can be included within this category, as well as the research made by Coudart (1992) in New Guinea, and by David and Karlin in Siberia (2003). The final approach is one that gives great importance to the anthropological thinking on the social and cultural dimensions of the material culture. Again, the work on stone axes in New Guinea performed by Pétrequin and Pétrequin (1993) is representative of this group, as well as the work by Pierre Lemonnier (1992, 2012) and Oliver Gosselain (2000, 2008), both representatives of the *technique et culture* school. These two researchers have made significant contributions, especially the former, who described and contributed to the understanding of the *chaîne opératoire*.

French ethnoarchaeologists have carried out some projects in Latin America, although their impact is still limited and not comparable with the ones in Africa and Asia. The few current examples include the recent study by archaeologist Claude Coutet (2011, 2014) in Guyana, who reconstructed the *chaîne opératoire* of several pottery traditions based on ethnoarchaeological research among two indigenous groups: the Ka'lina and the Palikur. The work of Coutet is deeply influenced by Gosselain and is devoted not only to the reconstruction of the *chaîne opératoire*, but also to the techno-stylistic characterization and the searching for the source of pottery variability. Another ethnoarchaeological research among the Palikur, includes study of their pottery tradition performed by van den Bel (2009) and Rostain (2012). The latter also used the ethnoarchaeological information from the Ashuar in order to interpret the archaeological record of the Upano Valley in Ecuador.

We should mention here an emergent ethnoarchaeological tradition from Spain, although it does not yet have the impact of the previous ones (for a summary see García Roselló, 2008: 34-43; and, for a relatively early theoretical discussion, see Onrubia Pintado, 1988). This trend includes several different lines, some of them with some common traits related to the "postcolonial critique". One is developed by Alfredo González-Ruibal, who is part of the Spanish research team in Ethiopia directed by Víctor Fernández Martínez (2004). He developed original approaches, which would be placed in the previously mentioned "postcolonial critique", based on his work not only in Ethiopia but also in abandoned rural houses in Galicia (González-Ruibal, 2003), and, more recently, among the Awá from Brazil (see below). He has argued that ethnoarchaeology, as conducted in the present with the aim of understanding the past, is the "quintessential asymmetrical science", and that ethnoarchaeology must be refashioned as the "archaeology of the present" which will help to bypass the bothersome Cartesian dualisms (González-Ruibal, 2006). He also believes that archaeologists can help understand the present in a different way, and therefore proposes to approach the study of present societies throughout their materiality based on three conceptual bases: the French anthropology of technology, the symmetrical perspective, and psychoanalysis (González-Ruibal, 2014: 8). Most of all, he is deeply convinced that ethnoarchaeology has to be a tool for the defense of the colonized and subordinated people under study.

Also in Ethiopia, ethnoarchaeological research is being undertaken by J. Salazar (Salazar *et al.*, 2012 and in press,) included in the project led by Tim Clack and Marcus Brittain in the Omo Valley (Brittain *et al.*, 2013). One of these studies is an interesting



Fig. 2. Spanish ethnoarchaeologists Almudena Hernando and Alfredo González-Ruibal recording arrows among the Awá-Guajá in the Juriti village (Maranhao State, Brazil). The photo was taken by a young Awá-Guajá in 2008. Photo courtesy of Alfredo González-Ruibal.

analysis of the Mursi's lithic industry, an agro-pastoralist group that has recently occupied the Mago Valley (Ethiopia), thus starting a sedentarization process (Salazar *et al.*, 2012). This study presents a typology of the different stone tools used by the group; it identifies the tools' functions, and sets criteria for the correct identification of their function through the study of the medium's morphology (Salazar *et al.*, 2012: 394). The work, in addition to covering these morphological and functional aspects, analyzes the social dimensions of the use of stone tools.

The ethnoarchaeological project carried out by Almudena Hernando (1997, 2002) among the Q'eqchi' in Guatemala represents another theoretical line following an original post-structuralist approach. Hernando suggests an ethnoarchaeology that attempts to understand the "world types" in which past societies could have lived, by analyzing structural features instead of the particulars of current non-modern societies (Hernando, 2006: 29). She used her ethnoarchaeological case study to approach complex cultural issues such as the construction of identity, the perception of the space, or gender issues (Hernando, 2002). In the last decade, together with Hernando, Gonzalez-Ruibal, Brazilian anthropologist Elizabeth Beserra Coelho and myself carried out an ethnoarchaeological project among the Awá, a Tupi-Guarani hunter-gatherer group from the northeast of Brazil (fig. 2). The goal was to study, with an ethnoarchaeological methodology, some of

the main cultural dimensions of the Awá society, such as technology (González-Ruibal *et al.*, 2011), settlement (González-Ruibal *et al.*, 2010), discard patterns (Politis *et al.*, 2013a), mobility (Politis *et al.*, 2013b) and gender and power (Hernando *et al.*, 2011). The project had some peculiar characteristics that are not frequent in the study of hunter-gatherer societies. Firstly, a strong emphasis was put on studying the Awa taking into account their history, neocolonial context, and the current sociopolitical scenario (Hernando *et al.*, 2006; González-Ruibal and Hernando, 2010). This explicit concern, which shaped research methods in the field and impacted upon the research goals, is not obvious in most studies of hunter-gatherer societies, which are usually under the constant threat of illegal mining and timber-cutting, furtive hunters, coca growers and so on. Secondly, one of the objectives was to generate useful information that would assist the Awá to improve their living conditions, and to take effective political actions in order to protect them. This approach, quite original in the field of ethnoarchaeology, was preceded in Amazonia by Wüst, (1998, see below) and has to be also placed in the theoretical framework of the postcolonial critique (Lydon and Rizvi, 2010). It is based on a strong commitment to the people under study (see also García Roselló, 2008: 33-34). Among other actions, all the papers generated by the project were translated into Portuguese and published in Brazil (Hernando and Beserra Coelho, 2013) with the goal of making all the information gathered and the proposed interpretations available in the country for the design of protection and sustainability policies.

In addition to Hernando and González-Ruibal, the other Spaniard who has conducted ethnoarchaeology in Latin America is Jaume García Roselló, who has undertaken research on pottery production in Chile. In a vast list of contributions, which includes a monograph (García Roselló, 2008) and several papers (García Roselló, 2006, 2007), García Roselló puts forward the concept of “productive strategy”, which is intended to go beyond the concept of an operative chain, which is based only on technological aspects. As a result, this study not only incorporates an analysis of pottery production, but also considers the study of social, economic and ideological aspects, as well as the use of the space and the pieces produced (García Roselló, 2008). Another interesting approach has been the study of Mapuche pottery from a historical perspective, analyzing changes in this technology caused by the Spanish conquest (García Roselló, 2007).

Inés Domingo (2011) has undertaken ethnoarchaeological research in Arnhem Land in northern Australia, directed toward the study of rock art in the region, and paying attention to the social context. Her research focuses on building a more critical approach to the archaeological study of past rock art, including the often latent discussion of the possibilities and limitations on interpreting the meaning of symbols (Domingo *et al.*, in press). She has also discussed the information encoded in rock art and how its production and consumption is embedded in sociocultural practices (Domingo and May, 2008; May and Domingo, 2010).

A series of studies of Galicia's current rural populations carried out by José Manuel Vázquez Varela should be mentioned as well. These studies have dealt with a variety of subjects, including gold extraction (Vázquez Varela, 1995), pottery production (Vázquez

Varela, 2003, 2005a), food conservation (Vázquez Varela, 2001, 2002), and the domestication and use of horses (Vázquez Varela, 2005b, 2006a, 2006b). In addition, the ethnoarchaeology of Spain's rural populations has been the object of study of several researchers, such as Torres and Sagardoy (2006). Recent interesting contributions also include the ethnoarchaeological study of the Asturias' cattlemen (González Álvarez, 2007; López Gómez and González Álvarez, 2013).

Finally, there are other regional ethnoarchaeological traditions, such as the German (Struwe, 2013) or the Scandinavian, which have concentrated their fieldwork basically in northern Scandinavia and Siberia (Gron and Kusnetzov, 2003; Gron, 2005, 2012). These traditions are quite new and have no recognizable influence on the ethnoarchaeology of Latin America.

Ethnoarchaeology in Latin America

Ethnographic research in Latin America was pervaded by a great interest in material culture and the description of production and use processes, especially since the late nineteenth century. In some cases, there was an interest in the social and ideational contexts these processes involved (see among others, Hyades, 1885; Hyades and Deniker, 1891; Nordenskiöld, 1912; Schmidt, 1905, 1914; Gusinde, 1931; Koch-Grünberg, 2005 [1909]). In these works, there are clear references to the researchers' awareness of the usefulness of their ethnographic rescue for archaeological interpretation. Barbosa Rodrigues (1876, 1892), for instance, inspired by the "uniformitarianism" theory that prevailed at the time, believed in analogy, assuming that "as geology, in ethnography, modern data explains old data" (Barbosa Rodrigues, 1876: 102; see Silva, 2009: 28-29). Another clear reference to the usefulness of current observations for archaeological interpretation can be found in the work by Goeldi (2009 [1904]), who after a detailed description of the use of stone axes by current Amazonian indigenous people stated: "I believe I do not deceive myself by thinking that this small contribution to South American ethnography will be welcomed by prehistory experts as well, inasmuch as it can stimulate a more careful comparison and revision of the Old and the New World stone ages" (Goeldi, 2009 [1904]: 133). With this statement, Goeldi was trying to adjust and set limits to the use and abuse of ethnographic analogy in archaeological interpretation. Although all of these authors lacked a subdisciplinary self-consciousness, their approaches constitute a sort of regional proto-ethnoarchaeology, and are its direct predecessors.

Ethnoarchaeology emerged in Latin America during the foundational period of the 1970s and contributed to the development of the discipline. There were two main lines of ethnoarchaeological research, one performed by North Americans, and the other by a variety of local and French archaeologists. In the first group, several contributions can be included: a) the early work carried out by Lyon (1970), who observed the action of dogs

with bones discarded by humans in a Peruvian Amazonian village; b) the observations made by Lange and Rydberg (1972) in an abandoned house in Costa Rica; c) the research by R. Carneiro (1979), related to the use of stone axes among the Yanomamö of Venezuela; and d) the investigation by Donald Lathrap (1969, 1970, 1983), related to pottery production and discard patterns among the Shipibo-Conibo and to the longevity of ceramics among the indigenous communities of the Upper Ucayali River in Peru (see also Deboer, 1974; Deboer and Lathrap, 1979). The latter was a pioneering ethnoarchaeological research designed to answer very specific questions related to the interpretation of the Early Formative site of Real Alto in the coast of Ecuador. This groundbreaking development, inspired by Lathrap and followed by a number of his disciples (Zeidler, 1983, 1984; Siegler and Roe, 1986; Stahl and Zeidler, 1990) had a tremendous influence on the archaeological study of ceramic production as well as ceramic use and discard behavior in Lowland South America (Zeidler, 2014: 61). Actually, Lathrap's interest in ethnoarchaeology began very early, even before the formalization of the subdiscipline, with his dissertation research in the late 1950s and early 1960s (Lathrap, 1962). It was related to his immersion in the Shipibo-Conibo society in his archaeological study area on the Ucayali River in the Upper Amazon (Zeidler, 2014).

In the second group, the research by Irmhild Wüst (1975), in an article that is rarely mentioned in the literature, stands out. This is one of the earliest studies of pottery manufacture, carried out within the framework of a regional archeological project (Schmitz, 1975). The Brazilian archeologist T. Miller Jr. (1975, 1979) conducted interesting studies on lithic production among the last of the Xetá, in Paraná State, Brazil, and Annette Laming-Emperaire, together with her Brazilian colleagues M.J. Menezes and M.D. Andreatta, later published more complete observations on the same group (Laming-Emperaire *et al.*, 1978). Miller also produced very interesting observations about pottery technology among the Kaingang, and identified the “*esfumaramento*” technique (Miller Jr., 1979). Moreover, he made some early reflections on ethnoarchaeology, bringing attention to the potential of South American indigenous societies (Miller Jr., 1981-1982). The research undertaken by Mendonça de Souza (1978) can be included in this pioneering stage as well.

In the 1980s, some ethnoarchaeologists worked on the spatial distribution of discarded bones and other debris in camps among the Aché of Paraguay and on the formation process of their settlements (Jones, 1983; Borrero and Yacobaccio, 1989). These scholars were searching for general principles that connected human behavior to the archaeological record, in accord with the theoretical mainstream present in the United States at that time (see for example Binford, 1981). The study of pottery production in the Andes within a processual and analytical framework was a focus of great attention as well, especially by Argentinian archaeologists working in the northwest of the country (Cremonte, 1984, 1988-1989; García, 1988).

From the 1990s onwards, at least three tendencies can be identified in Latin America (see summary in Politis, 2004; and, for a summary of Brazilian ethnoarchaeology, see Robrahn-González, 2004). The first trend restricts case studies to the physical effects of behaviors that are defined, within the systems, by variables that in principle can be well



Fig. 3. Peruvian ethnoarchaeologist Gabriel Ramón Joffré recording the production of pottery in Lanche Bajo, Piura (Peru), in 2004. Photo courtesy of Gabriel Ramón Joffré.

controlled, as it happens with, for example, ceramics production, use and abandonment (i.e., García, 1993; Williams, 1994; López Varela, 2005); the spatial distribution of discarded bones (Borrero and Yacobaccio, 1989; Stahl and Zeidler, 1990; Jones, 1993); or the management and exploitation of camelids among Andean herders (Yacobaccio *et al.*, 1998). Also, study of the technological organization of the Pumé of Venezuela made by Greaves (1997) would be included in this approach. This line of research has points in common with the French logicism we have summarized above (see Roux, 2013). The scholars working from this perspective argue that effort should be directed toward particular cases within general theoretical models (Yacobaccio and Madero, 1995). This approach emphasizes the technoeconomic function of material culture and the ecological constraints in the resource's exploitation, although, in many cases, the social context is informed and taken into account for the interpretations. We can include here a strong line of research named "ceramic ecology" which made significant contributions to the ethnoarchaeology of the Andes and Mexico (Ph. Arnold, 2005; D. Arnold, 1985, 1993).

The second trend deals with the study of more complex systems, whose variables are harder to control but take into account more diverse phenomena and attempt to discern the non-technoeconomic meaning of objects through ethnographic case studies (for example, Hosler, 1996; Sillar, 2000; Silva, 2000; Ramón, 2008, 2013) (fig. 3). Of course, both



Fig. 4. An instant for archaeological interpretation: what is left behind when a camp is abandoned? The photo shows the very moment when the Nukak (Colombian Amazon) start placing their belongings into the baskets in order to move to a new area and build a new camp. Although children are just watching rather than helping, they are really helpful during the trip. 1996. Photo of the author.

tendencies are tied to the material effects of behavior and their respective properties (that is, density, variability, and so on), but while the first one attempts to establish unambiguous relationships and strong cross-cultural regularities, the second one is directed toward understanding under what conditions (social and ideational, as well as material) one can expect certain kinds of archeological records. This second tendency values the usefulness of context-specific cultural particulars, and explores the continuity of meanings attached to specific symbols and icons (see discussion in Saunders, 1998). The ethnoarchaeological study of symbolic, cosmological, and even ontological issues has been incorporated into this line of research through material derivatives in egalitarian societies such as Amazonian hunter-gatherers (fig. 4) (Politis and Saunders, 2002; Politis, 2007; González-Ruibal *et al.*, 2011), and Andean native people, both agriculturists and herders (Haber, 2001; Kuznar, 2001; Nielsen, 2000) (fig. 5) and lowland villagers (Frías, 1993; Silva, 2000, 2008).

The third trend is represented by a group of research projects that focus on collecting ethnoarchaeological data to reconstruct the historical processes of present-day Indians (Heckenberger, 1996; Heckenberger *et al.*, 1999; Wüst, 1998; Wüst and Barreto, 1999; Oliveira, 1996). This has its antecedent in the classic article by Steward (1942), which discusses the historical approach to archaeology, and is closely allied to what has been called



Fig. 5. Argentine ethnoarchaeologist Axel Nielsen, resting in one stop during the trip, when he was traveling with llama herders in Lipez (Potosí highlands, Bolivia), 2000. Photo courtesy of Axel Nielsen.

“indigenous history” (in the sense of Oliveira, 2001) or with a conception of archaeology as a long-lasting history. In this approach, the emphasis is on understanding the process of cultural continuity using ethnographic, ethnoarchaeological, and archeological data from the same area, where a connection between contemporary people and the people who produced the archeological deposit under investigation can be proven. It is argued that the cultural continuity of the chronological sequence from pre-Hispanic periods to the present, based on a “marked conservatism”—not only in the spatial organization of the villages but also on ceramics technology, subsistence, and the placement of settlements—“permits fairly detailed direct historical comparisons” (Heckenberger *et al.*, 1999). This approach has had greater development among the Arawak ethno-linguistic groups (Heckenberger, 1996) and the Tupi (Silva *et al.*, 2008; Stuchi, 2008). Although the results obtained by this kind of research could be considered historically restricted, the potential for understanding general cultural patterns in past Amazonian societies—such as village configuration and size, village occupation and abandonment, formation of black soils, and so on—is enormous. While this third trend is strong in Brazil, the colossal long-term archaeological, ethnohistorical, and ethnoarchaeological research carried out by Tom Dillehay among the Mapuche in their land in southern Chile can be placed in this set (Dillehay, 2007, 2014).

In addition to these tendencies, some ethnoarchaeological studies in Latin America have been developed in comparison and relation to the archaeological record of another region, without assuming historical continuity, but presuming certain conditions of comparability. The results of research by José López Mazz (2004, 2006) draw attention to the formal similarities and differences between the Matis villages of the Vale do Javari, in the Brazilian Amazon, and the set of archaeological *cerritos* of the Uruguayan lowlands (López Mazz, 2008, 2010). The information provided by the Matis village is used to interpret and discuss the genesis and function of the set of mounds found in Merin Lake. Although this archaeological record of the Uruguayan territory was related to Pampean hunter-gatherer communities, there are different elements that enable association to the “Amazonian *mundi system*” (López Mazz, 2008).

Another less represented approach is that which explores the contemporary use and perception of the landscape in reference to the archaeological data, but without assuming any historical continuity. One example is the study made by Yépez Regalado (2007) about resignification of the archaeological landscape in Laguna de la Ciudad (Ecuador) by the Afro-descendants and the Manabí peasants. This short review should also mention a latent and varied ethnoarchaeological production, but of which there is very little published, that can be found in Master theses especially in Brazil (i.e., Stuchi, 2008) and Mexico (i.e. Vargas, 2010).

The general review of South American contributions to ethnoarchaeology could also include the work being done by the Dutch in the Caribbean in the last few years, included in wider archaeological projects, such as the research by J. Mans (2012, 2014) about the Trio and the Waiwai of Southern Guiana and Surinam. The contributions by Siegel, working among the same groups and the Wayana in the Guiana highlands (2014) should be included as well.

The so-called Latin American Social Archaeology, one of the schools of thought original to Latin America, has not made incursions into the field of ethnoarchaeology, despite acknowledging its central role in analogical argumentation and accepting its importance for archaeological interpretation (Gándara, 2006). The exception are the works by Patricia Fournier (1990, 1995) in Mexico, who is, at the same time, one of the more critical authors of this school of thought (Castillo *et al.*, 2008). Perhaps this lack of interest in ethnoarchaeology has to do with the fact that, in this school, “production modes” (for instance, hunter-gatherer or tribal) have been generated deductively and function as stereotypes. Thus, Latin American social archaeologists have not corroborated or contrasted these analytic categories against the ethnographic information available and, as a result, have eroded the variability, richness and complexity of every one of these “production modes”. In this context, it is not difficult to understand why almost none of the Latin American social archaeologists have not embarked on an ethnoarchaeological project neither used nor debated the models generated from ethnoarchaeology.

Some topics in ethnoarchaeology

Ethnoarchaeology has been looked upon with a degree of mistrust due to the difficulties that exist in extrapolating contemporary data to analyze past societies, starting with the fact that the epistemological bases of how to conduct such extrapolations are not sufficiently developed. This has generated doubts and criticism of analogical reasoning. Presently, in spite of certain inherent and difficult-to-resolve problems, the great majority of archaeologists recognizes the usefulness of analogical arguments in the process of interpretation or explanation of the archaeological record, and considers them as indispensable tools (i.e., Hernando, 1995; David and Kramer, 2001; Ravn, 2011; Lyons, 2013).

Another issue that has generated mistrust is that, to a greater or lesser degree, present-day indigenous societies—the prime source of analogy, although not the only one—have had contact with Western society and are integrated, in one form or another, into the “globalization” process (Cordy, 1976). Many researchers (Begler, 1978: 576-77; Brown, 1970; Buenaventura-Posso and Brown, 1980; Flanagan, 1989: 259; Forline, 1995: 61-62; Seymour-Smith, 1991: 639, 644), for example, have pointed out that inter-ethnic contact has often resulted in a decrease in women’s authority in their own groups (Hernando *et al.*, 2011) while in remote areas of Aboriginal Australia it is the opposite—women have gained authority as leaders in areas that were once led by men. This is because men have lost some of their main roles—hunter, ceremonial—through changes generated by contact (C. Smith pers. Com., 2015). It has been proposed, consequently, that present-day societies cannot serve as analogical references for past societies because most of them—if no all—are a product of the colonial impact (for the Pacific archaeology see criticism in Spriggs, 2008 and for South America see the account by Siegel, 2014: 354). This criticism, however, is unjustified and basically refers to the poor application of analogy (Wylie, 1985), rather than to analogy as a way of approaching the study of past societies. Moreover, it is recognized that the power of a given analogy does not depend upon the delimitation of which traditional or “pristine” group is the source, but rather upon its logical structure and the conditions of comparability.

The use of analogical reasoning in archaeology has been subject to lively debate (Gardin, 1979; Gould, 1980, 1900; Wylie, 1985), and strong criticism has been raised in the past (Wobst, 1978). Freeman (1968: 262), for example, rejected the use of ethnographic analogy, treating this line of reasoning as unscientific, fundamentally because he considered it impossible to discover “the parameters of sociocultural structure unique to prehistoric time periods”. Gould (1980) declared the death of analogy saying that its time had gone by. However, the anti-analogy storm passed decades ago (although some late criticism still persists), and there is currently a consensus that analogical reasoning is necessary for every step of the investigation if our final goal is to use present data to deepen the knowledge of past societies (Hernando, 1995; Sillar, 2000: 8; Gándara, 2006; for a reborn debate on this subject see Ravn, 2011). Therefore, based on the epistemological foundation of the analogical argumentation, ethnoarchaeology seeks to provide information from a

better known source—living societies—in order to transfer this information to another, less known, subject—extinct societies.

Since ethnoarchaeological research operates under the principles of analogical reasoning, the two elements of analogy (the source and the subject) need not to be the same (in the opposite case, analogical reasoning would not be necessary), but rather there should be certain conditions of comparability between terms. Analogy's strength does not lie in the degree of similarity between source (in this case, present-day society) and subject (past society, as perceived through the archaeological record), but rather in the logical structure of the argument and the similarity between the terms of the relation. Obviously, the greater the similarity between source and subject, the greater the potential of the analogical argument, but the degree of similarity alone is in no way a guarantee of the strength of the argument or the veracity of the statements.

A different point that has also been discussed sometimes is the archaeological excavations made by ethnoarchaeologists. Despite the relatively widespread belief that they also excavate the places where the observations were made (i.e., the sites created during their fieldwork or other sites in the region), this rarely happens today. Nevertheless, a few decades ago, it occurred with certain frequency in several research projects, such as when Lamming Emperaire dug a recently abandoned Hetá hut (Lamming Emperaire *et al.*, 1978) or when Jones (1993) collected what was left one month before in an Aché camp “with the goal of determining how well observations made during site occupation hold through time” (p. 109). Binford (1983: 176-84), during his fieldwork in Alaska, also recorded in detail all the activities performed in a particular house in Tulugak, and, when it was abandoned, excavated it to see if he could correctly reconstruct the gender relationships of the space he had observed using only the archaeological evidence (Fewster, 2013). In general terms, ethnoarchaeologists generate models about human discard patterns or about the material derivatives of human behavior, but they are not primarily interested in recovering what is left after a place is abandoned. The generation of the “archaeological record” is usually observed in “real time” during the fieldwork, and it is the interface between the dynamic of the living culture and their material consequence what mostly interests the ethnoarchaeologists (fig. 6). Thus, the excavation of a site where no observations of the living culture have been made does not have much relevance for ethnoarchaeology, and the study of differential preservation of the remains belongs to the field of taphonomy, as well as the study of the natural processes of site formation.

What does attract ethnoarchaeologists is researching what Indigenous and non-western people think about and how they conceptualize the archaeological remains found in their territory, independently of whether they are assigned to their ancestors or not. This has a great potential because it entails an emic interpretation of the archaeological record. An interesting example is the study on the interpretation that the Asurini of Xingu made of the archaeological remains found in the indigenous park Kuatinemu (Silva, 2002). Another interesting case was recorded among the Nukak of the Colombian Amazon. In my own fieldwork in a *chontaduro* (*Bactris gasipaes* palms) grove, I found pottery sherds



Fig. 6. Food processing. Nukak women (Colombian Amazon) breaking cumare fruits (*Astrocaryum aculeatum*), with a thick stick and an anvil stone, to feed the kids of the band. Such activities are usually carried around the household hearth, where a palimpsest of remains accumulates, 1995. Photo of the author.

scattered on the surface. The Nukak told me that they belonged to their “grandparents”, a generic reference that implies several generations back. Generally, *chontaduro* orchards are found deep in the rainforest, far from colonized areas. They were established by “the elders” and can be traced at least three generations back. They also say, “Now we no longer plant *chontaduro*; all that there is was planted by our grandfathers; now we harvest the fruit”. These places are related to the ancestors, since the palms connect past and contemporary generations. The elders planted them or used these plots for cultivation, and now their descendants consume the *chontaduro* fruit. Some of the major representations of the symbolic aspect of the *chontaduro* orchards are the performance of *baak-wáadn* (a gathering ritual) in or near these spots and the inhumation of the deceased. Therefore, these palms and the sherds materialize the connection in time between generations (Politis, 2007: 280).

Besides the sharing of the colonial origin of anthropology and the neocolonial scenario where most ethnoarchaeological projects are carried out, there are more concrete and obvious ethical issues related to the practice of this subdiscipline. The ethical aspect of fieldwork is one of these issues, and, surely, one of the most important (Fewster, 2001a; Hodder, 1982: 39). Unfortunately, very little has been written about ethnoarchaeological fieldwork (for exceptions see David and Kramer, 2001: 84-90; Fewster, 2001a; Politis, 2014). The governing ethical and good practice standards that are applied to general



Fig. 7. A Hoti man entering into his recently built dome-shaped hut in the savanna-tropical rainforest border. The construction of such shelters is still made in the traditional way. It takes about 10 days, and during this period the people stay in temporary lean to shelter in the nearby, inside the rainforest. High Parucito River (Venezuela), 2002. Photo of the author.

anthropological research should have first priority; these include full respect for the community and its customs, minimal interference, and informed consent. This last point is sometimes difficult to obtain in its entirety, due to both linguistic and cultural differences. It is often difficult to explain the ethnoarchaeologists' passion for systematically recording everyday activities and preserving what the people under study consider junk (sherds, broken bones, wrecked artifacts, etc.). This is, of course, related to the degree of "Westernization" of the group in question, but for many traditional societies the actions carried out by ethnoarchaeologists remain incomprehensible: why pick up and put in bags a lot of dirty bones that do not have any meat? Why draw and map an abandoned camp full of garbage? Why do ethnoarchaeologists ask absolutely obvious questions once and again, and seem to never fully understand the answers? I suspect that the people under study have a poor image of the ethnoarchaeologists and little respect for our work. Full and real informed consent can be obtained quite easily in some cases, but it is unrealistic, for example, from communities which are in an early stage of contact with modern society such as the Nukak (Cabrera *et al.*, 1999; Politis, 2007), the Awá (Forline, 1997; Hernando *et al.*, 2006) or the Hoti (Politis and Jaimes, 2005) (fig. 7), or from people with very different rationality patterns. What is usually obtained from the community or from their leaders



Fig. 8. The author among the Hoti of the High Parucito river (Venezuela), trying to explain (unsuccessfully) the purpose of the ethnoarchaeological research with them 2003. Photo of the author.

is some kind of agreement for the ethnoarchaeologists to accompany, observe, and record in a particular way some of their everyday activities, but by no means does this imply that the observed people are fully aware of what the ethnoarchaeological research in question really means (fig. 8). This is a latent ethical dilemma that is hard to solve.

The asymmetrical relation between the “other” that is being studied and the ethnoarchaeologist is another important issue that has been hardly discussed as well. Even in the common cases of the emergence of leaders that embrace the values of modern society at the expense of their own traditions, the result still creates an asymmetrical situation (Etienne and Leacock, 1980; Leacock and Lee, 1982; Lee, 1982: 50-51; Stearman, 1989). Owing to the logic of Western society, its representatives in many contact situations (reservation guards, priests, ethnologists, linguists, adventurers, etc.) have traditionally been patriarchal minded males who considered other males as their sole valid interlocutors. Thus, the Westerners’ interaction with the indigenous group created or reinforced gender differences that may have not existed before, or not in that degree (Hernando *et al.*, 2011). In fact, not only are many of the accounts supported by allegedly objective observations biased, they also reflect behavior and relationships conditioned by the Western researcher’s very presence (Flanagan, 1989: 252). I am sure that part of the observed actions and

answers obtained during this fieldwork is biased due to this asymmetrical situation. And this is probably a constant to all ethnoarchaeological situations in the world. As a result, I am skeptical about the supposedly “objective and rigorous” observations, whether expressed in words, numbers or formulas, of which some ethnoarchaeological projects are proud.

A crucial and recurrent question in the contemporary debate is the following: how often are the results of ethnoarchaeological research applied in archaeological investigation, in what has been called “dirt archaeology” (Skibo, 2009) or “real archaeology”? Or, are the correlates, models, and proposals generated from ethnoarchaeology relevant for the current archaeological interpretation and for theory building? Or, are ethnoarchaeologists only producing cautionary tales, more anecdotic than effective? Worries emerged in the beginning of the subdiscipline (Rice, 1984) and continued along the last decades, especially in relation to pottery analysis (Sullivan, 2008a, 2008b; see discussion in Skibo, 2009) and to the direction the subdiscipline has taken (Simms, 1992). Some years ago, Hegmon (2000: 135) declared: “Ethnoarchaeologists have, for the most part, failed to find clear-cut universally applicable correlates for many social and economic processes, such as specialization or ethnicity”. More recently, González-Ruibal added his voice to this chorus stating that “practically no archaeologist uses the work of ethnoarchaeologists to understand the archaeological record” (González-Ruibal, 2008: 17),⁴ and gave the example of the Mayan area, where, from his perspective, in spite of the great amount of ethnoarchaeological work carried out in the region, the information is hardly used by Mayanist archaeologists.

In principle, I disagree with these pessimistic views, although I do recognize that a great amount of ethnoarchaeological information, correlates, or models are hardly ever used in any archaeological interpretation or in discussion searching for “theory building”. No matter which theoretical approach they come from, several results—in many cases obtained with a lot of effort and spending a lot time and funds—are never used in any analogical arguments or in any theoretical debates. There certainly exists a sort of “limbo”. But there are three arguments against the unenthusiastic view. Firstly, these “forgotten models” have a latent value that could be activated at any time, when new sources for specific archaeological interpretation were required. This kind of ethnoarchaeological repository would be fundamental in the future if globalization succeeds and traditional behaviors and other—non-western—patterns of rationality disappear (see also Yu, 2014: 2544). Secondly, while it is true that ethnoarchaeologists failed to find “clear-cut universally applicable correlates”, archaeology and anthropology failed as well. The time of the law-like propositions has passed and now most archaeologists believe that correlates are not universal, that they are contextually positioned and historically situated. In consequence, the search for universals is not in the archaeological agenda any more (although for exceptions see Vila, 2006; Roux, 2007). Thirdly, many ethnoarchaeological results have proved to be very useful for archaeological interpretation, and are at the core of the debate. Let me develop some examples to support this.

4. My translation.

The product of ethnoarchaeology enters into the interpretation cycle in basically three ways. One is more direct: specific models or correlates that are generated based on the observation of a given living society are applied to interpret the material record of some extinct society or to illuminate some dimensions of its cultural pattern, on the bases that both societies share some elements which make logical the analogical argumentation. The research by López Mazz (2010), Stahl and Zeilder (1990) or my own study about children ethnoarchaeology and the application to the Pampas archaeological record (Politis, 1998) are good examples of this. This application is quite common, but I agree that it is not very frequent. I suspect that the criticism has been made keeping this kind of appliance in mind and is probably not focused in hunter-gatherers ethnoarchaeology.

The second way is more complex, but still quite recognizable. Ethnoarchaeological observations of a given society, along with other similar observations of the same kind, are compound with historical, anthropological and archaeological information in order to generate models that can be useful for archaeological interpretation. It is not that activity A correlates with derivatives B and C; it is that the record of activity A and derivatives, along with all other sources of information and inspiration, permits the generation of models that would help to understand and explain some dimensions of past societies. The over-quoted hunter-gatherer models produced by Binford (1978, 1979) are good examples. It is difficult to find a Latin American archaeologist devoted to hunter-gatherer studies who has not applied on one occasion (and, surely, on more than one) some of the categories proposed by Binford: curated/expedient, (fig. 9) foragers/collectors, residential and logistical mobility, etc. Binford's last book (2001) was decidedly a great effort to generate complex models by the equally complex integration of ethnographic, ethnoarchaeological, and environmental data to predict hunter-gatherers' behavior.

Another example of this trend, which obviously has a much lower impact, is my own work on food taboos among the Nukak, hunter-gatherers from the Colombian Amazon (Politis and Saunders, 2002; Politis, 2007). This research has been applied to interpret some "anomalies" in the archaeological record of the extinct societies of the Beagle Channel in southern Argentina (Fiore and Zangrando, 2006). In this case study, the authors integrate archaeological and ethnographic records representative of the sixteenth to the early twentieth centuries and analyzed them with the goal of discussing the existence of a food avoidance of certain potentially high-yield species such as the Patagonian blennies (*Eleginops maclovinus*), possibly as a result of ceremonial activities. The zooarchaeological analyses of the case were structured based on optimality principles, which establish that the intensity of exploitation of different food resources varies in relation to ecological conditions (Fiore and Zangrando, 2006). However, they discussed the model proposed by Politis and Saunders (2002) in relation to food taboos among contemporary hunter-gatherers, and how they can be explored in the archaeological record in order to look for another, non-ecological factor which would be affecting human dietary practices and thus the formation of the zooarchaeological assemblages. Throughout a thoughtful discussion, in which they combine different sources of information and theoretical perspectives, the



Fig. 9. Recording technology, a corner stone in ethnoarchaeological studies. A young Nukak (Colombian Amazon) is adding black resin to fix the polished bone point of his harpoon. This is a clear cut example of a curated technology in Binford's terms 1996. Photo of the author.

authors conclude that avoidance of consumption of a resource of high potential yield, like the Patagonian blennie, might constitute a taboo. This hypothesis “is reinforced by the fact that the avoidance of Patagonian blennie consumption seems to have stemmed from probably implicit prescriptions generated by the male actions in the ceremonial sphere of the Yamana society” (Fiore and Zangrando, 2006: 386). This case illustrates the applications of ethnoarchaeology but not in a direct way, not in a *vis-à-vis* comparison between a given archaeological record and the material correlates of a determined observed behavior. What this example shows is the application of certain elements of a model based, in part, in ethnoarchaeological research, allowing expansion of the interpretative horizon and making specific references to some material derivatives. This is the kind of use of ethnoarchaeology that I see more frequently in contemporary archaeology, both in Latin America and in the rest of the world.

The third way is the integrated use of archaeological, ethnoarchaeological, anthropological, and ethnohistorical sources to generate comprehensive models based on a demonstrated cultural continuity. The historical or continuous analogy overcame the cross-cultural and discontinuous analogy. Here, the ethnoarchaeological results are less obvious because they are melted in a myriad of contributions from other disciplines. In Africa, the research



Fig. 10. An Awa women breastfeeding a recently captured infant monkey during a monkey hunting in which the parents were killed. This kind of intimate link between humans and animals always amazed ethnoarchaeologists and shows a logic in which relationships between people and animals are very different from ours. Maranhao State, Brazil 2009. Photo of the author.

by Gosselain (1992, 2002) about the variability of the technical tradition among potters in Cameroon, first, and in Southwestern Niger, later on (Gosselain, 2008), is a good example of this kind of integration of ethnoarchaeological production. In Latin America, this trend is clear in the research in the Amazonia (see above) and in the contributions by Tom Dillehay (2007), in the Mapuche land in Chile.

Ethnoarchaeology has been also active in the more general anthropological goal, which is of great importance to archaeology as well, of understanding and exploring other forms of thought or cosmologies. Within this field, patterns of rationality and logical structures are analyzed to find what differs from Western patterns (Hernando, 1995). In this application of ethnoarchaeology, the correlation with material culture is secondary to the attempt to understand alternative cosmovisions and different logics, independently of their material correlates. Obviously, the aim is not attempting to understand extinct norms of thought in depth, but rather to detect, where possible, keys to its functioning and discern how and which ideological and social factors (as well as techno-economical ones) acted on the configuration of the material record. Our own research on gender, motherhood, and power among the Awá of Brazil (Hernando *et al.*, 2011) (fig. 10) and the study made by Haber (2009) about animism among the Antofalla people in Argentina exemplify this trend.

Ethnoarchaeology, in some way or another, fuels theory building in archaeology and anthropology. It has been at the core of the theoretical discussion for the last forty years, and the two more influential archaeologists in contemporary theory, Binford and Hodder, certainly did ethnoarchaeology in the field, a practice that was a great source of inspiration for them. Although ethnoarchaeology's concrete data may not be used in full, this subdiscipline is helping to change the way in which several current trends—such as symmetrical archaeology, structuralist and post-structuralist archaeology, landscape archaeology, etc.—are approaching their studies. There are more and more archaeologists that accept that the protagonist of the past was people to whom we cannot project today's way of understanding the world. And, to a great extent, this is thanks to ethnoarchaeology.

Finally, ethnoarchaeology, as part of ethnography and archaeology, cannot detach itself from its colonial legacy and still retains a colonial aftertaste. Therefore, it is not left unaffected by the current debate in the discipline about the study of "otherness". In the current global scenario, it is becoming more and more difficult to separate "we" from "they". If "we" are the western-modern (postmodern)-urban-capitalists, "they" are the others: a group that includes a huge variety of people called not only Indigenous, but also "traditional", and who are sometimes defined in opposition to "us": "non-western", "non-industrial", "pre-industrial", "non-modern", or even "pre-modern" people. None of these labels give a full account of the "others", who are turning into a sort of "distant us". Therefore, the limits between "they"—the living society, our source for the analogical argumentation—and "us"—the western researchers, the ethnoarchaeologists—are becoming fuzzy, dynamic, and situational. This is quite clear in the various ethnoarchaeological studies among the rural people in Spain (Vázquez Varela, 2005a, 2005b, 2006a, 2006b) or in the traditional exploitation of salt in Romania (Alexianu and Weller, 2009; Alexianu, 2013).

When the field emerged, indigenous societies were the main target of ethnoarchaeology; the more isolated and pristine they were, the better. The first systematic ethnoarchaeological projects focused on communities that still behaved and did things in a "traditional way" (see for example Longacre, 1974; Yellen, 1977; White and Modjesca, 1978; Lamming Empeaire *et al.*, 1978, etc.). In the late 1980s, however, some doubts were raised especially about the existence of completely autonomous or isolated indigenous people; the concern was that most of them were, in the past and today, increasingly more a part of macro-sociopolitical systems, and, therefore, they should be studied within this global context. The so-called revisionist debate illustrates the avenues of this discussion in relation to the Kung San (Wilmsen, 1989; Solway and Lee, 1990; Lee, 1992). With the globalization process taking place, with the acknowledgement of the existence of regional political macro-systems, and with the epistemological stability of analogical argumentation (which was not based on any degree of "pristinity" of the source society), ethnoarchaeology rearranged its focus. Paradoxically, as interest in ethnoarchaeological studies grows and as its contributions are valued as means of archaeological inference, "traditional" societies dwindle—especially and dramatically hunter-gatherer groups—and the range of variation of contemporary sociopolitical referents is consequently reduced. The continual disruption of traditional or non-industrial lifestyles,

the processes of ethnogenesis, and the steady advance of globalization are leading to the demise of practices that help observers interpret the past. Also, as a result of the reduction of indigenous societies, the subdiscipline reoriented its focus, and there are many projects in the world that study peasants, rural and even suburban societies, or other fractions of western societies as sources for analogy (i.e., Fewster, 2007; Alexianu, 2013; Vargas, 2010).

Final thoughts

As I see, ethnoarchaeology attempts to formulate models that permit the better understanding of the cultural patterns of human societies, both in the present and the past. Essentially, ethnoarchaeology is a form of ethnography that takes into consideration aspects and relationships that are not approached in detail by traditional ethnographies. In some way, it looks at contemporary societies with archaeological eyes and with archaeological questions in mind, but it also takes into account the past from which present societies are relatively close or distant. Therefore, temporality and materiality are key elements in the epistemological foundation of ethnoarchaeology. This characteristic is unique and no other discipline or subdiscipline has the same strategy or shares the same methodology. This subdiscipline has proven that material culture is not a passive consequence of culture itself, but an active agent in the construction of social dynamics.

In spite of some distrustful forecasts and against the argument of ethnoarchaeology having little impact on “real archaeology”, I believe that the subdiscipline is influencing archaeological reasoning increasingly, and that archaeologists are using the results of ethnoarchaeological research to generate hypothesis and to test the validity of their assumptions. Most of the time, it is not a direct use, a *vis-à-vis* comparison, but ethnoarchaeological data and results are embedded in most of the popular models and have a prominent role in the archaeological interpretation and the validation of assumptions and premises. The reduction of traditional societies and modes of life is compensated with the redirection of the ethnoarchaeological study toward segments or fractions of contemporary western societies. However, the methodological procedure to integrate this new set of results into the interpretation of the archaeological record still needs to be properly developed. There is a methodological gap in the analogical reasoning that needs to be covered. It is clear that studies of contemporary material culture can tell us more about our society, but it is unclear how it will contribute to understanding the distant past of other people. However, for some new theoretical trends (Hamilakis and Anagnostopoulos, 2009; Harrison and Schofield, 2010; González-Ruibal, 2014), it should not be a goal, and the study of the materiality of current societies is a goal in it itself, without any pretension to be part any analogical reasoning.

As a corollary, it should be noted that one of the main contributions of ethnoarchaeology is the mitigation of the ethnocentrism that permeates the archaeological view of the

people in the past and the interpretation of long-term human processes. I conclude that ethnoarchaeology, with its particular focus upon contemporary societies, is making a great contribution not only to the understanding of human behavior but also to archaeology theory building.

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